Balloon Cars

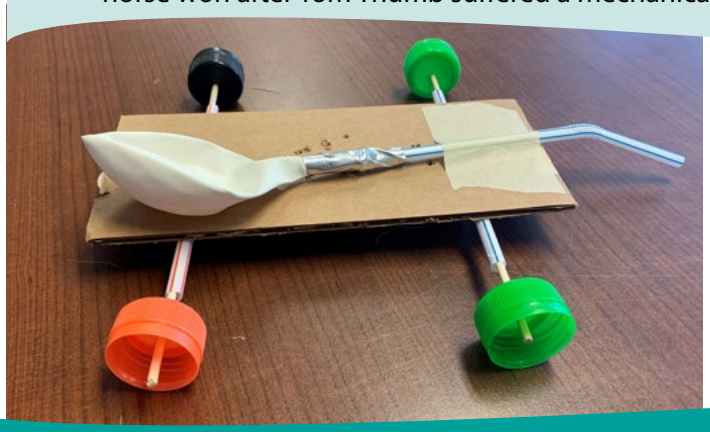
Make your own Balloon Cars right at home!

Background

The wheel has always been considered a major invention in the history of humankind. But it would not work as well as it does in the 21st century had it not been for the creation of the axle. An axle is a rod or pole centered in the wheel that allows the wheel to turn around it. The wheel then spins in a balanced circle to be used as transportation on a train or to turn the hands of a clock. Wheels allow heavy objects to be moved at great distances, easily facilitating movement or transportation while supporting a load, or performing labor in machines.

"Tom Thumb" was the first American-built steam locomotive to operate on a common-carrier railroad. It was designed and constructed by Peter Cooper in 1830 to convince owners of the newly formed Baltimore and Ohio Railroad (B&O) to use steam engines; it was not intended to enter revenue service. It was a participant in an impromptu race with a horse-drawn car, which the horse won after Tom Thumb suffered a mechanical failure. However, the demonstration was successful, and the railroad committed to the use of steam locomotion and held trials in the following year for a working engine.

When the B&O began operation in 1830, its trains were pulled by horses. Constructed by Richard Imlay, the "Pioneer" was the first passenger car on the Baltimore & Ohio and was one of the first passenger cars produced in the United States. The "Pioneer" carried the B&O board of directors on the railroad's first run to Ellicott Mills on May 22, 1830. In 1836, the B&O stopped using horses to pull trains.



Share pictures of your completed project with us on Facebook, Twitter or Instagram with the hashtag #AtHomeWithHoCoRec

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Supplies

- ☐ Cardboard Platforms (5"x8" recommended)
- ☐ Bottle Caps (with holes punctured or cardboard circle cut outs)
- ☐ Kabob Skewers
- ☐ Jumbo Popsicle Sticks
- ☐ Duct Tape
- ☐ Straws (works best with flexible straws)
- ☐ Scissors
- ☐ Balloons
- ☐ Paper Clips
- ☐ Rubber Bands

Activity

The year is 1836. You are Peter Cooper and want to create a mode of transportation that is faster and more reliable than horse drawn carriages. Use the materials provided to create your "steam power by balloon" engines to see who can make their trains go farther/fastest?

Instructions

1. Using the bottle caps and skewers, create "axles" and attach them to the bottom of the cardboard platform with duct tape. It's recommended to run the skewers through the straws, so it can be secured to the car and rotate easily. The wheels should be able to rotate easily and be more or less aligned.
2. Attach a straw securely to a balloon with a masking tape. That connection should be airtight. Then attach the straw to the engine. From the opposite end of the balloon, blow through the straw to let air into the balloon. When you've perfected your balloon car, set up a race with other family members!